Message

From: Walker, Stuart [Walker.Stuart@epa.gov]
Sent: 2/3/2020 5:02:13 PM
To: Praskins, Wayne [Praskins.Wayne@epa.gov]; Hays, David C Jr CIV USARMY CENWK (USA) [David.C.Hays@usace.army.mil]; Clements, Julie A CIV (USA) [Julie.A.Clements@usace.army.mil]; Rankins, Jonathan E CIV USARMY CEMVS (USA) [Jonathan.E.Rankins@usace.army.mil]
Subject: RE: Hunters Point RESRAD BUILD/BPRG comparison

Any differences also have to be evaluated with level of consistency with how we would address chemical contamination. For fixed/3D external contamination there is less of linkage with chemical risk assessment, but for settled dust, ingestion is essentially the same and external vs dermal less so. The idea is to see if RESRAD Build is better for a CERCLA risk assessment which would also involve summing risks with any chemical risk assessment, or similarity with risk assessments for buildings at other CERCLA sites.

Stuart Walker
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From: Praskins, Wayne <Praskins.Wayne@epa.gov>
Sent: Monday, February 03, 2020 11:43 AM
To: Hays, David C Jr CIV USARMY CENWK (USA) <David.C.Hays@usace.army.mil>; Clements, Julie A CIV (USA) <Julie.A.Clements@usace.army.mil>; Rankins, Jonathan E CIV USARMY CEMVS (USA) <Jonathan.E.Rankins@usace.army.mil>; Walker, Stuart <Walker.Stuart@epa.gov>
Subject: RE: Hunters Point RESRAD BUILD/BPRG comparison

Dave –

Thanks.

That all sounds good. I agree with the goals stated in your email and would describe our primary goal as determining if RESRAD BUILD has some advantage over or is a better fit compared to the BPRG calculator for the Hunters Point buildings. The Navy has the lead at the site and wants to use RESRAD BUILD. We (EPA) need to respond to the Navy and let them know whether we can support its use.

And yes, I would like a brief written report documenting your efforts and findings. In addition, I thought it might be worthwhile to have a call with the Navy staff who generated the Hunters Point files after we have preliminary findings but before you finish your report.

Wayne Praskins | Superfund Project Manager
U.S. Environmental Protection Agency Region 9
75 Hawthorne St. (SFD-7-3)
San Francisco, CA 94105
415-972-3181

From: Hays, David C Jr CIV USARMY CENWK (USA) <David.C.Hays@usace.army.mil>
Sent: Friday, January 31, 2020 5:05 AM
To: Praskins, Wayne <Praskins.Wayne@epa.gov>; Clements, Julie A CIV (USA) <Julie.A.Clements@usace.army.mil>; Rankins, Jonathan E CIV USARMY CEMVS (USA) <Jonathan.E.Rankins@usace.army.mil>; Walker, Stuart

<Walker.Stuart@epa.gov>
Subject: RE: Hunters Point RESRAD BUILD/BPRG comparison

Wayne, we are working our way through that now. I am working through both models and the Navy spreadsheets to determine what is the main difference or if several small differences per isotope add up to the overall difference. I am checking every input and calculation. I am currently focusing on the adult worker scenario and Jon is working on the resident. Right now, for ingestion, it does not appear to be a slope factor issue as the RESRADBLD slope factors from ICRP72 are 1.3 to 3.6 times higher than the BPRG calculator SFs (for adults). I hesitate to provide any conclusions right now as a lot of work to do still and want to make sure we have it right. My goal is: once we know the differences you can then decide which model is most useful or we can provide what changes should be made to each/either to make them useful at Hunters Point.

I hope to be through my review part by our next call. Resident may take longer but I don't want to speak for Jon. Julie's review and final product to follow. We did not get to speak about the final product on our call. Because it is such a complex issue, I assume a written report documenting our efforts and findings. Does that fit with what you are expecting?

Respectfully,
Dave

From: Praskins, Wayne [mailto:Praskins.Wayne@epa.gov]
Sent: Thursday, January 30, 2020 11:08 PM
To: Clements, Julie A CIV (USA) <Julie.A.Clements@usace.army.mil>; Hays, David C Jr CIV USARMY CENWK (USA) <David.C.Hays@usace.army.mil>; Rankins, Jonathan E CIV USARMY CEMVS (USA) <Jonathan.E.Rankins@usace.army.mil>; Walker, Stuart <Walker.Stuart@epa.gov>
Subject: [Non-DoD Source] Hunters Point RESRAD BUILD/BPRG comparison

Julie/David/Jonathan/Stuart –

If I am interpreting the Navy's files correctly and did the math right, here is a comparison of estimated health risks to a resident associated with the Hunter's Point remediation goals for Ra-226, the most prevalent radionuclide at the Hunters Point site. (I used the "Navy BPRG" runs rather than the "EPA BPRG" runs.)

		Resident Risk (x 10-4)			
		Ingestion Risk	**Inhalation Risk**	**External Risk**	**Total Risk**
Ra-226	BPRG ("Navy")	2.7	-	0.17	**2.9**
	RESRAD BUILD	0.00382	0.00658	0.0194	**0.03**

Is my summary correct? If so, why are the ingestion risks so much higher for the BPRG calculator compared to RESRAD BUILD?

Although the absolute risks aren't as high, I noted a similar difference in the ingestion pathway for Th-232

		Resident Risk (x 10-4)			
		Ingestion Risk	**Inhalation Risk**	**External Risk**	**Total Risk**
Th-232	BPRG ("Navy")	0.5	-	0.082	**0.59**
	RESRAD BUILD	0.00146	0.0228	0.00981	**0.034**

And it looks like the external risks using BPRG are about 10 x higher for both, as well as a third radionuclide I looked at (Cs-137).

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